Pediatric “Body Packing”

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**Background:** Recent events in the United States have led to increased security at national borders, resulting in an unexpected increase in drug seizures. In response, drug smugglers may begin using children as couriers, including using them as “body packers.”

**Objective:** To look at the occurrence of body packing, the concealing of contraband within the human body, which is well documented in adults, in the pediatric literature.

**Patient Reports:** Two cases of pediatric body packing, in boys aged 16 years and 12 years. Patient 1, a 16-year-old boy, presented with findings consistent with opioid intoxication after arriving in the United States on a transcontinental flight. His mental status improved after he received naloxone hydrochloride, and he subsequently confessed to body packing heroin. He was treated with a naloxone infusion and aggressive gastrointestinal decontamination. He ultimately passed 53 packets of heroin, one of which had ruptured. He recovered uneventfully. Patient 2, a 12-year-old boy, presented to the emergency department with rectal bleeding. He had recently arrived in the United States from Europe, and he confessed to body packing heroin. He was treated with whole-bowel irrigation and activated charcoal, and he subsequently passed 84 packets. He also recovered uneventfully.

**Conclusions:** We report the first 2 cases of body packing in the pediatric literature and review the diagnosis and management of this clinical entity. Pediatricians should be aware that body packing, regrettably, is not confined to the adult population.

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**IN THE WAKE of the events of September 11, 2001, security at border crossings in the United States has increased dramatically. One of the unintended consequences of this action has been an increase in drug seizures. Faced with this increase in security, drug smugglers may begin using children as vehicles to transport their cargo. Recently, a 5-year-old girl traveling alone from Colombia to New York was discovered to have more than 1 kg of heroin in her suitcase.1**

A more dangerous means of smuggling drugs into the country is by “body packing.” Body packing is the practice by which international drug smugglers employ human beings to hide cargo in their bodies. Cocaine and heroin are by far the drugs most commonly implicated.

There are no previous reports of body packing in the pediatric literature. We describe 2 young body packers, aged 16 years and 12 years, and review the epidemiology, clinical presentation, diagnosis, and management of this condition.

**PATIENT REPORTS**

**PATIENT 1**

A 16-year-old boy who had recently arrived in the United States was found unresponsive on a city street. He had arrived that day after a transcontinental flight from Europe. His vital signs were pulse, 138 beats/min; blood pressure, 130/60 mm Hg; and respiratory rate, 12 breaths/min and shallow. The physical examination was otherwise unremarkable. The patient received 25 g of dextrose, 4 mg of naloxone hydrochloride, and 100 mg of thiamine hydrochloride, all intravenously. His mental status improved immediately.

A urine sample was positive for opiates on toxicologic testing. A routine chest radiograph indicated abnormal densities in the stomach, a finding confirmed by plain abdominal radiography (Figure 1). Computed tomography (CT) of the abdomen (Figure 2) demonstrated multiple intraluminal foreign bodies. The patient admitted to body packing 53 bags of
heroin. He was treated with activated charcoal, whole-bowel irrigation, and a continuous infusion of naloxone. By hospital day 4, he had passed 53 packets rectally, one of which had ruptured. A second CT scan of the abdomen did not show any intraluminal foreign bodies. He was discharged to the custody of law enforcement authorities.

PATIENT 2

A 12-year-old boy presented to the emergency department with a chief complaint of rectal bleeding. He confessed to body packing 87 packets of heroin and stated that he had begun to pass packets per rectum. He had no other somatic complaints. His vital signs, including his respiratory rate, were within reference ranges. His mental status was normal, and his pupils were midrange and reactive. An abdominal examination revealed normal bowel sounds.

A plain abdominal radiograph demonstrated multiple abnormal opacities consistent with drug packets. He was treated with whole-bowel irrigation and activated charcoal, and he ultimately passed 84 packets. Barium-enhanced radiography after the passage of these packets indicated no foreign bodies in the gastrointestinal tract, and it was concluded that 3 packets had passed prior to his initial visit. He was subsequently discharged.

COMMENT

Body packing is the smuggling of illicit drugs using the human body as a vehicle. Individual packets of 8 to 12 g of a drug (usually cocaine or heroin) are wrapped with waterproof materials, such as latex glove fingers or condoms, then sealed. The body packer (or “mule”) usually swallows these packets, sometimes more than 200 per trip, although retrograde packing of the rectum and vagina have also been reported. The mule then boards a flight to a destination country and sometimes uses constipating agents to retard bowel motility. On arrival, body packers pass their contraband, often with the aid of laxatives, cathartics, or enemas.

Body packers may present to health care providers in 3 ways: with signs and symptoms of drug toxicity owing to leaking or ruptured packets, with symptoms of gastrointestinal obstruction or perforation, or asymptomatic, either because they fear the consequences of packet rupture or because they are under arrest.

In the stable patient, the initial history and physical examination focuses on ascertaining the type of drug and number of packets ingested as well as the presence or absence of gastrointestinal obstruction. Body packers usually know the exact amount of cargo they carry, but they have reasons to be deceitful, and the history may therefore be unreliable. The presence of cramping, bloating, and abdominal pain suggests obstruction. Rectal and/or abdominal examination may reveal the presence of drug packets. Careful chest and abdominal examinations in patients who present with gastrointestinal symptoms may reveal signs of obstruction, or even perforation, of the bowel or esophagus.

In the unstable patient or the patient with altered mental status, the presence of a “toxidrome” (physical findings suggesting a particular toxic ingestion) may suggest a diagnosis. Cocaine causes hypertension, tachycardia, hyperthermia, dilated pupils, diaphoresis, and agitation. Heroin causes respiratory depression, constricted pupils, decreased bowel sounds, and a depressed level of consciousness. These findings can help establish a diagnosis despite a paucity of historical information.

The plain abdominal radiograph is 75% to 95% sensitive for drug packets, and 3 specific signs should be sought. Multiple radiodense foreign bodies may represent drug packets, but they may also represent normal stool. The “double-condom” sign is formed when air trapped between layers of condoms renders them more visible. A “rosette-like finding” represents air trapped in a knot when a condom is tied. Computed tomography is frequently used to image the abdomen, but the failure of CT to identify packets has been described. Contrast-enhanced plain abdominal radiography, which has a sensitivity and specificity of 96%, may be a superior method. Ultrasonography has been suggested as a useful method, although sensitivity and specificity have not been established.
Toxicologic testing of urine samples lacks the sensitivity to be a useful screening tool. Although one large study found a sensitivity of 97%,^4^ sensitivities as low as 17% to 30% have also been reported.^6,15^ For all patients, the airway, breathing, and circulation should be secured. Drug packets in the rectum or vagina should be carefully removed, but only if they can be easily grasped with the fingers. Gastrointestinal decontamination should be performed unless the patient is being prepared for surgery. Activated charcoal will adsorb any free drug; multiple doses should be given to increase the amount of charcoal near the drug packets at any given time. Although activated charcoal administration is theoretically of benefit for all drugs, it is most important for drugs for which an effective antidote is not available, such as cocaine. Whole-bowel irrigation with a polyethylene glycol/electrolyte lavage solution will help propel packets through the gastrointestinal tract. The end point of whole-bowel irrigation is a clear rectal effluent devoid of packets. Oil-based cathartics and laxatives should be avoided because they may weaken packets^17,18^ and contribute to packet rupture.^17^ Endoscopy plays little role in the management of body packers. Although successful endoscopic removal of packets has been reported,^19^ so has packet rupture. Packets accessible to the endoscopist usually represent a small fraction of the gastrointestinal burden, and the risks inherent in routinely removing them usually outweigh the benefit.

The treatment of patients who present with symptoms of drug toxicity depends on the drug being smuggled. Symptomatic heroin body packers are usually treated conservatively with naloxone, which completely reverses the clinical findings of opiate toxicity. Symptomatic cocaine body packers require immediate pharmacological and surgical therapy. Agitation, seizures, hyperthermia, and hypertension are treated initially with benzodiazepines. Hyperthermia may require external cooling and neuromuscular blockade, and hypertension may require additional pharmacological agents, such as phentolamine mesylate, nitroglycerine, or sodium nitroprusside. B-blockade is absolutely contraindicated because it may lead to unopposed α-adrenergic stimulation and a paradoxical increase in blood pressure. After initial stabilization, cocaine-intoxicated body packers should be brought to the operating room for surgical decontamination.

Patients presenting with symptoms of gastrointestinal obstruction or perforation should also undergo immediate operative intervention. There is no role for conservative management in these cases.

At our institution, patients who present without symptoms are treated conservatively with activated charcoal, whole-bowel irrigation, and observation in an intensive care unit. Conservative therapy fails (defined as the development of bowel obstruction or acute cocaine toxicity) in only about 5% of patients,^2,3,7^ who then require surgical treatment. When the treating physician believes that the patient has passed all packets, contrast-
enhanced radiography and/or CT should be performed to document a “clean” gastrointestinal tract.

The management of body packers is challenging; an algorithm is presented (Figure 3), but it may not be appropriate for all patients. Consultation with a regional poison control center is advisable.

CONCLUSION

Body packing is well described in adults, but not in children. We report 2 cases of pediatric body packing and describe the epidemiology, diagnosis, and management of this condition. Pediatricians should be aware that body packing, once thought to be strictly an adult problem, is now a pediatric problem as well.

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REFERENCES


